

[illegible]

An optical waveguide ridge 14 has a top surface 14a stretching uniformly from a top surface of a semiconductor substrate 12, the top surface 14a being in contact with an exposed surface of the electrode 22. The electrode 22 is extended from the top surface of the waveguide ridge 14 downward while in close contact with the dielectric film 16 furnished on the flat top surface of the optical waveguide ridge 14. The p-type electrode 22 is extended over the dielectric film 16 on to the top surface of the semiconductor substrate 12 where an end of the electrode 22 is connected into a bonding pad 22a.